

FIG. 1

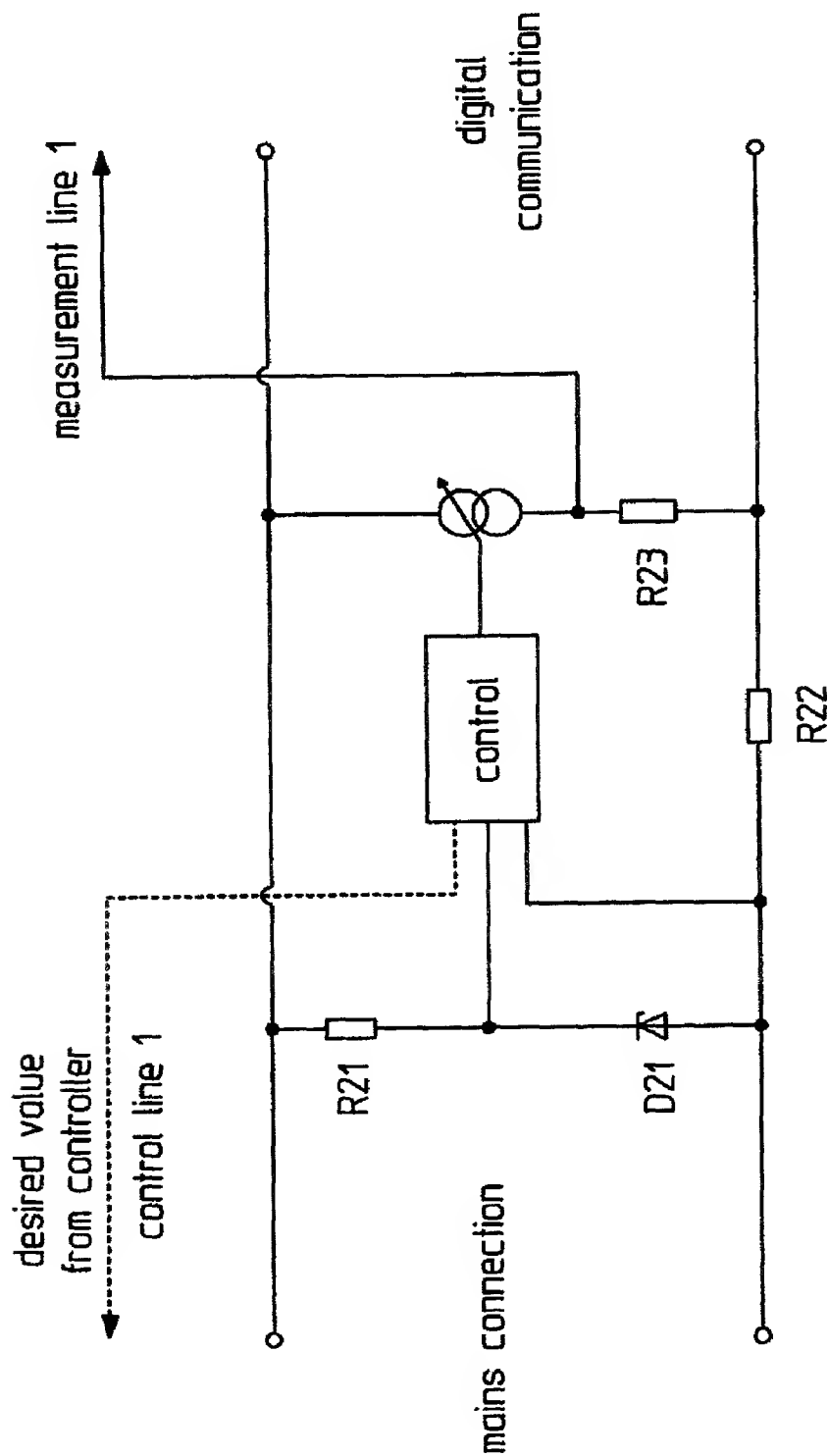


FIG. 2

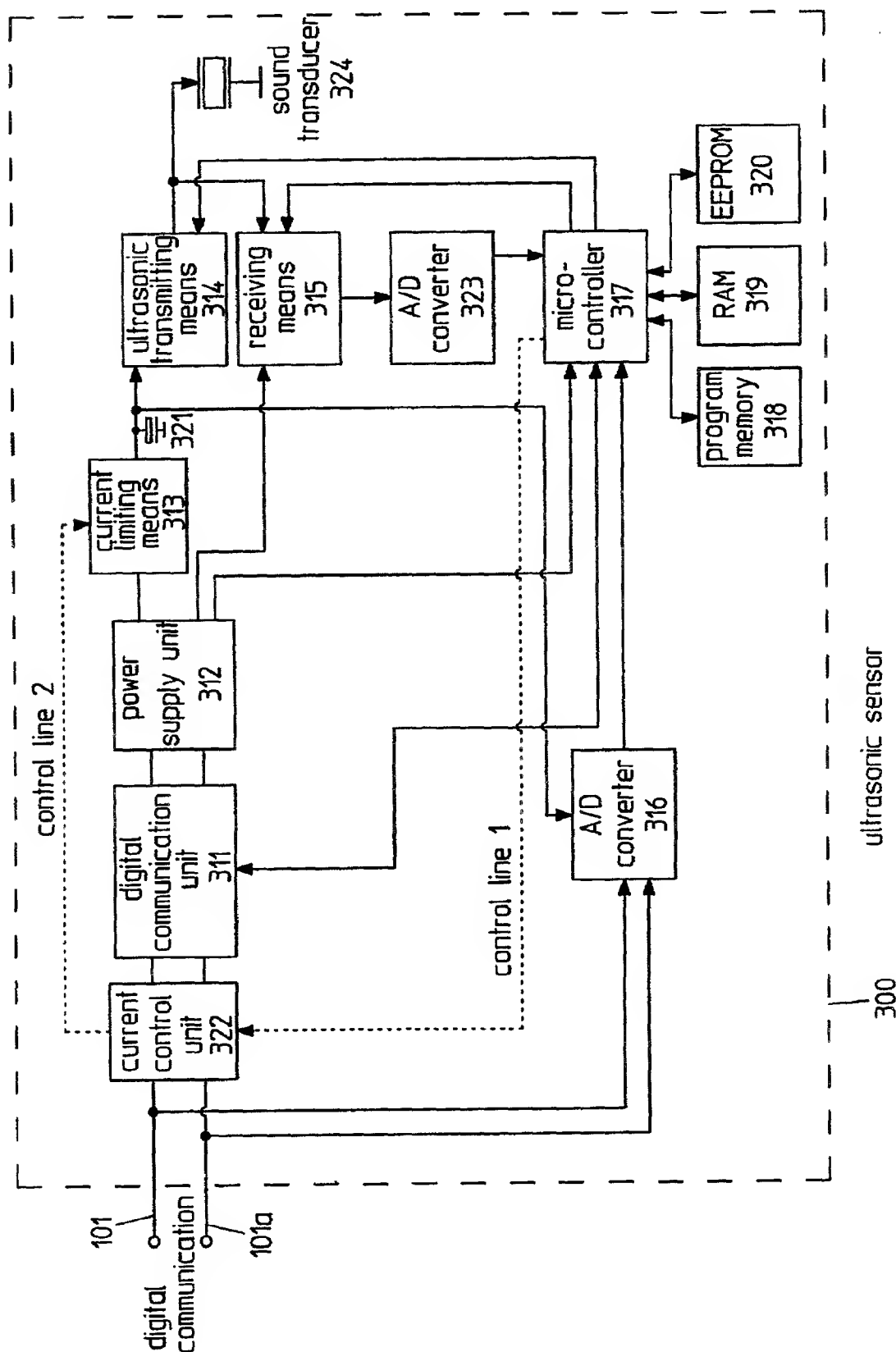


FIG. 3

TITLE: ELECTRONIC MEASURING DEVICE FOR DETECTING A PROCESS VARIABLE, IN PARTICULAR A RADAR
OR ULTRASONIC FILLING LEVEL MEASURING DEVICE, AND A METHOD FOR OPERATING

A MEASURING DEVICE OF THIS TYPE
INVENTORS NAME: Winfried Rauer et al.

SERIAL NO.: 09/998,000

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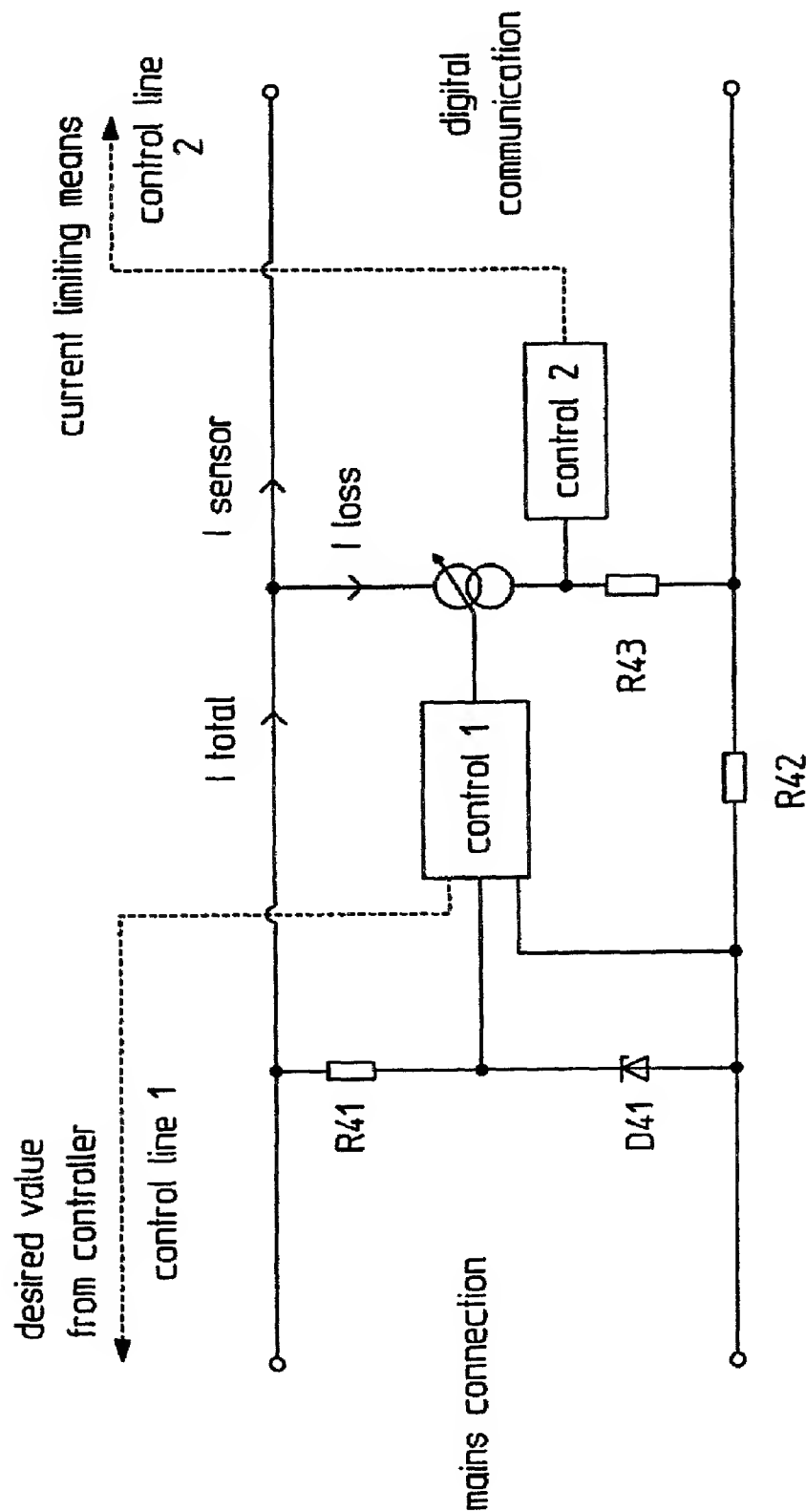


FIG. 4

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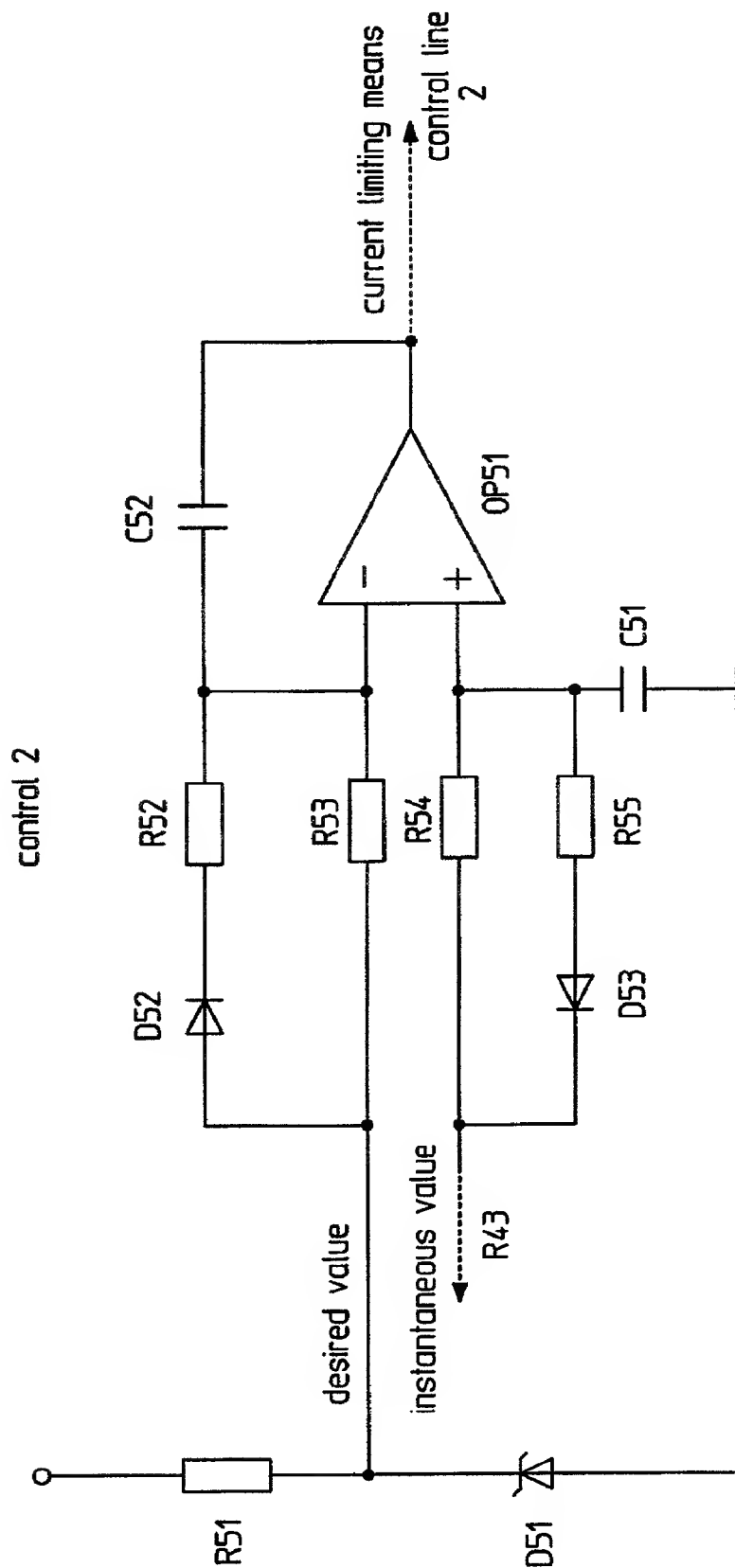
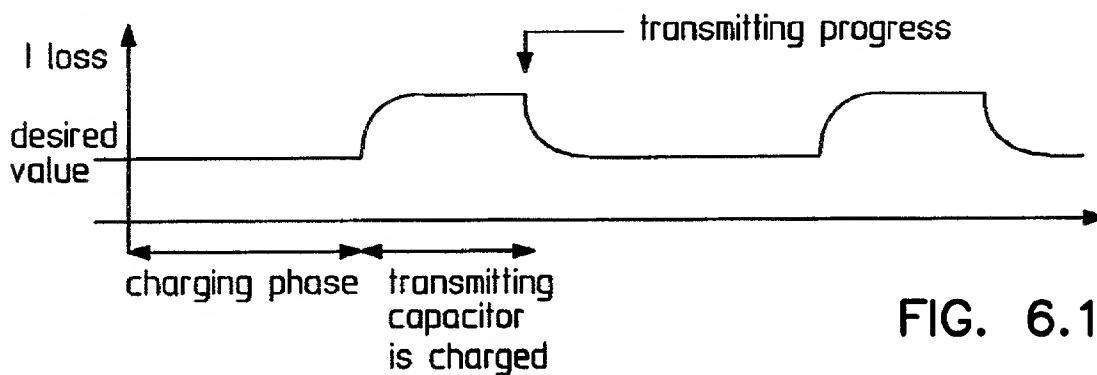
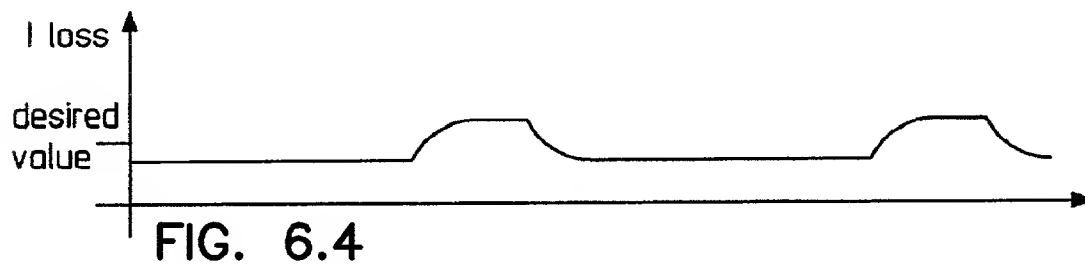
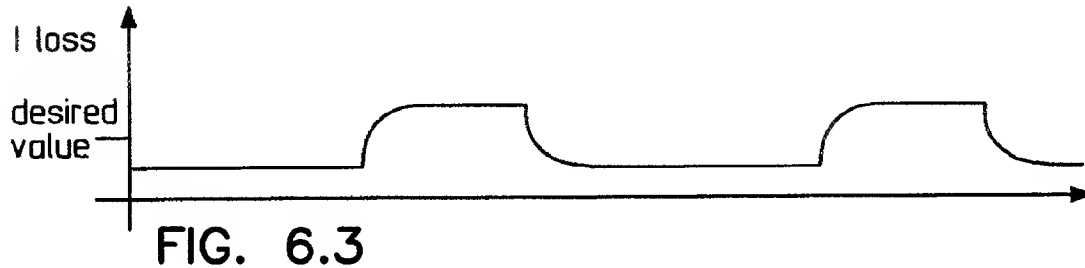
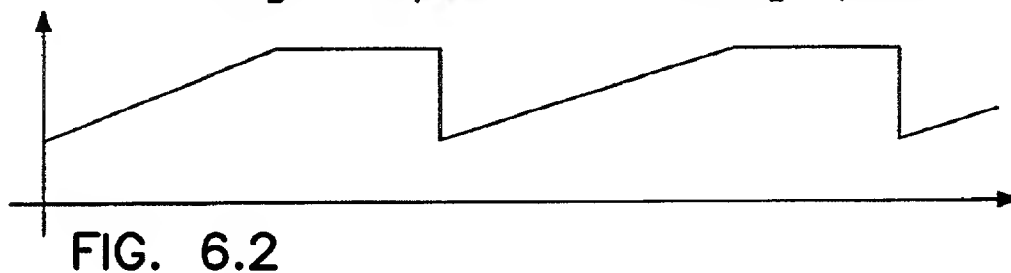


FIG. 5

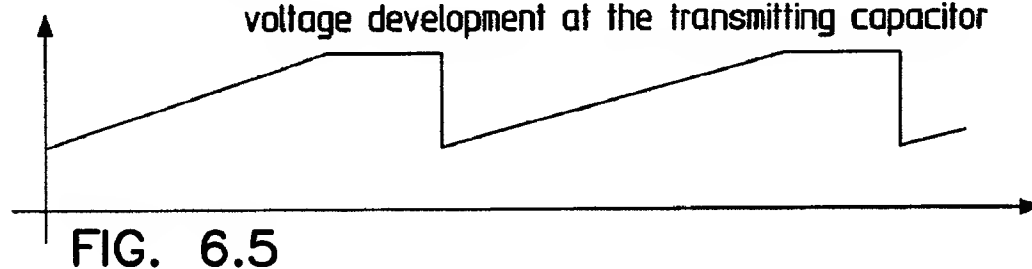
current development in the shunt arm of the current control unit (loss current)

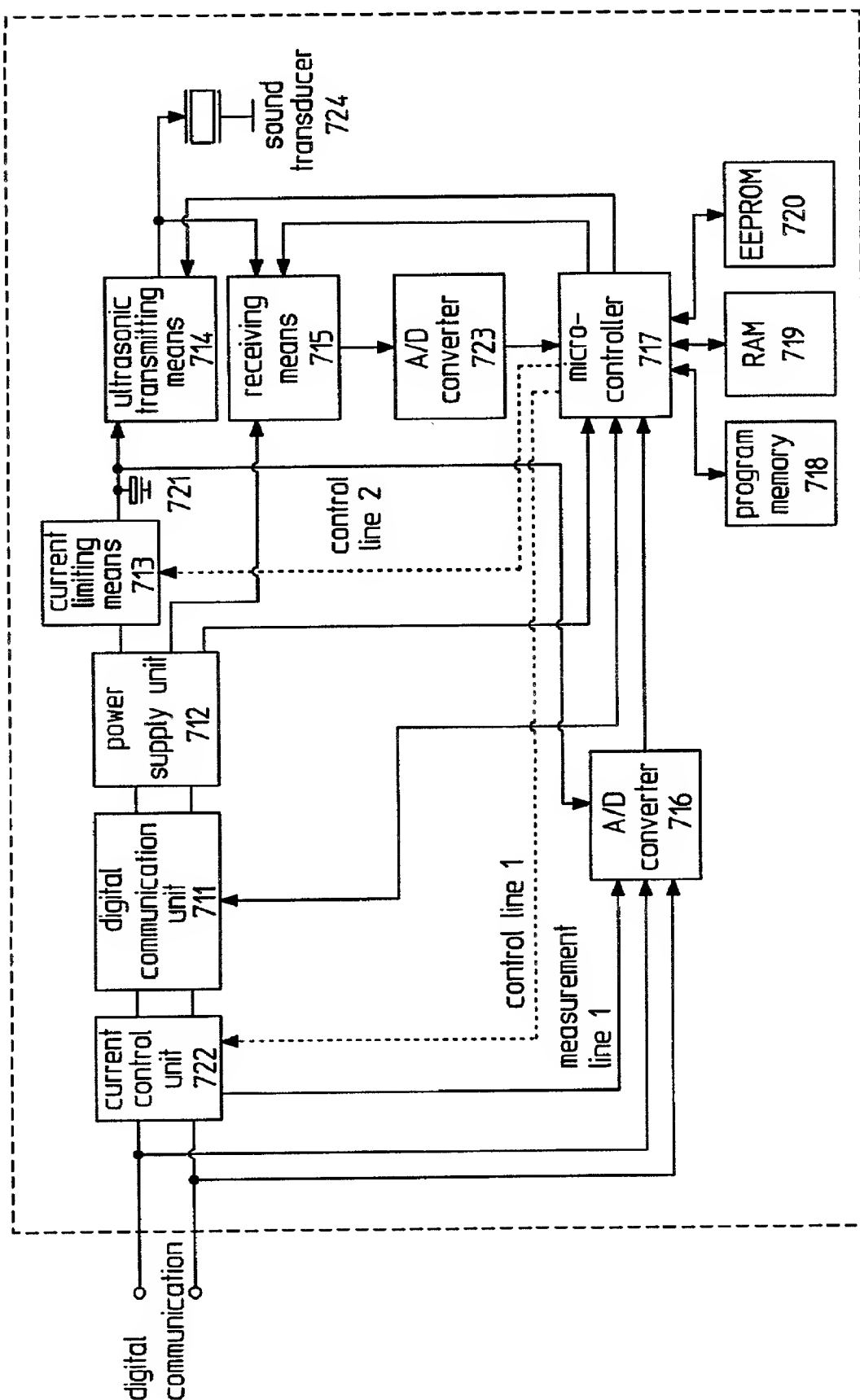


voltage development at the transmitting capacitor



voltage development at the transmitting capacitor





ultrasonic sensor

FIG. 7

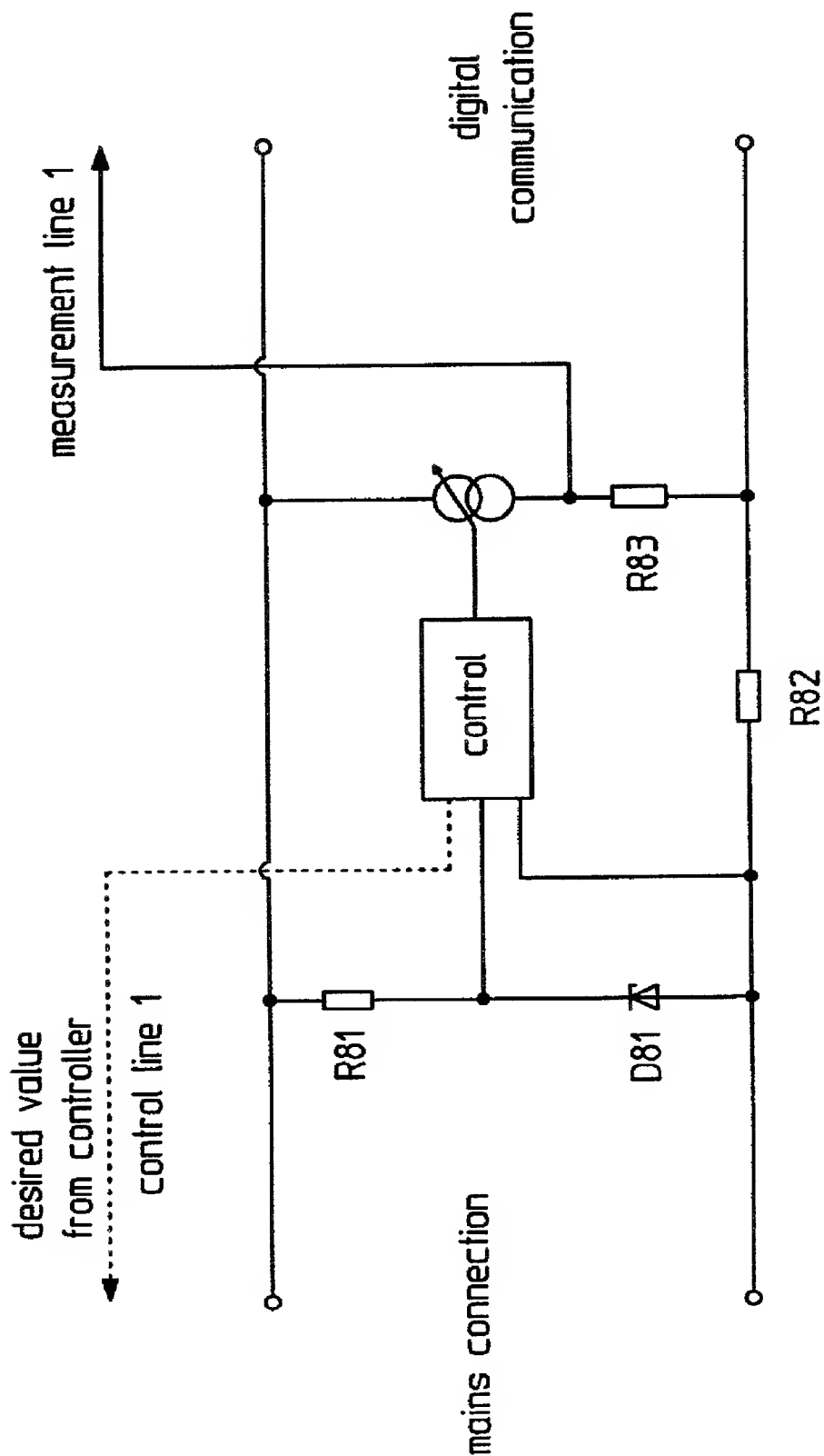


FIG. 8

SERIAL NO.: 09/998,000

ultrasonic sensor

The block diagram of system 100 shows the following components and their interconnections:

- digital communication** (input/output) is connected to the **current control unit 922**.
- The **current control unit 922** is connected to the **digital communication unit 911**.
- The **digital communication unit 911** is connected to the **power supply unit 912**.
- The **power supply unit 912** is connected to the **current limiting means 913**.
- The **current limiting means 913** is connected to the **ultrasonic transmitting means 914**.
- The **ultrasonic transmitting means 914** is connected to the **receiving means 915**.
- The **receiving means 915** is connected to the **A/D converter 923**.
- The **A/D converter 923** is connected to the **micro-controller 919**.
- The **micro-controller 919** is connected to the **program memory 918**, **RAM 919**, and **EEPROM 920**.
- The **micro-controller 919** is connected to the **A/D converter 916**.
- The **A/D converter 916** is connected to the **current limiting means 913**.
- The **current limiting means 913** is connected to the **control line 3**.
- The **control line 3** is connected to the **ultrasonic transmitting means 914**, **receiving means 915**, and **A/D converter 923**.
- The **ultrasonic transmitting means 914** is connected to the **sound transducer 924**.

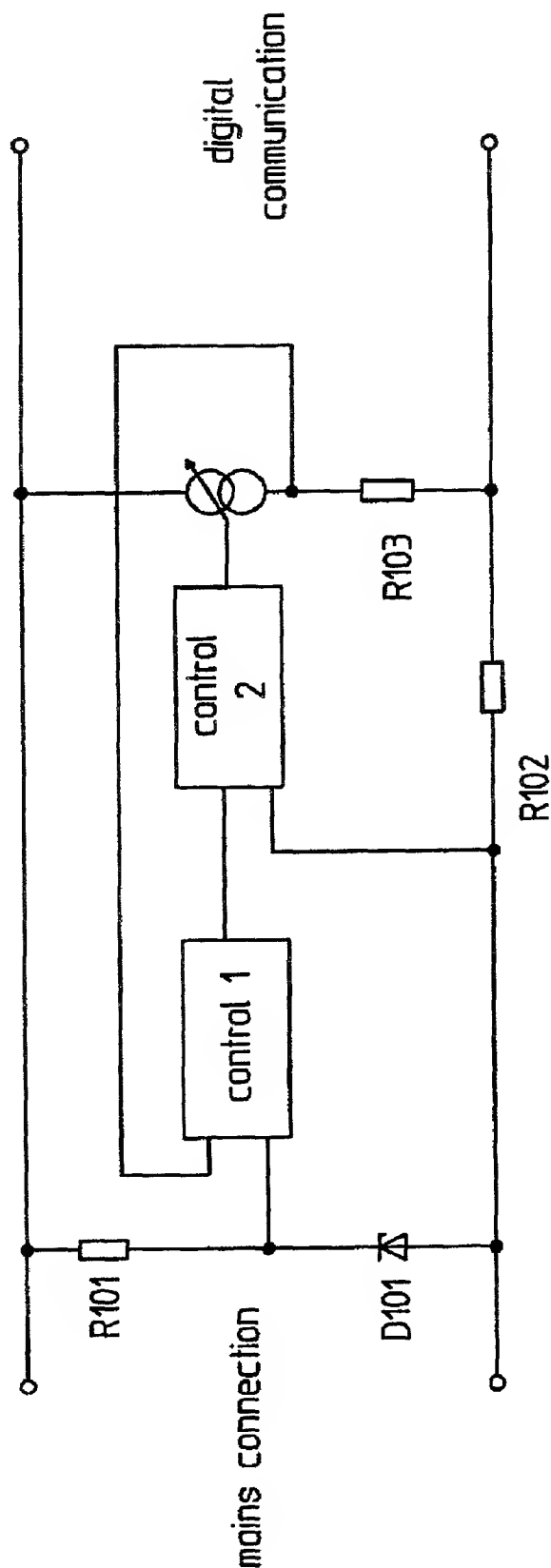


FIG. 10